

THE LUCITE[®] spectrum



VOLUME 6 • NUMBER 1 • 1968



bubble bubble The photograph on the cover is a close-up shot, through the door shown above. Although the headline is reminiscent of Macbeth, it is obvious that the young lady is no witch—the magic is in the door. Cast by Swedlow, Inc., Garden Grove, California, the acrylic panel is $\frac{5}{8}$ -inch thick with bubbles of random size and placement, which are open on one side. Both

photographs, cover and above, show the solid flat side of the panel facing the camera. Available in sizes up to 3-by-7 feet, the panels cast from Du Pont LUCITE® suggest use in doors as shown, partitions and room dividers, and unusual decorative lighting effects.

The bubbles have rounded edges on the open side avoiding much dirt entrapment and making them relatively easy to clean.

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The purpose of THE LUCITE® SPECTRUM is to provide useful information on building construction products made with Du Pont LUCITE® acrylic plastic materials. This publication will be a medium through which ideas about these materials may be exchanged. Your comments and suggestions are invited. If you desire further information on any product mentioned in this issue, please write to: The Editor, THE LUCITE® SPECTRUM, Du Pont Company, 2420 Nemours Building, Wilmington, Delaware 19898.

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Better things for better living...through chemistry

EDITOR: R. F. WELSH, JR. • ART DIRECTOR: R. L. DOWNES • PRODUCTION SUPERVISOR: J. C. RECORDS

CAPITAL IDEA

Although they are just a small portion of this ten-year, \$110 million building construction project, panels of Du Pont LUCITE® acrylic plastic enabled the architect to achieve unique architectural effects that highlight a feeling of sumptuousness in buildings that are extraordinarily inexpensive to construct.

The lighting fixtures of LUCITE are used in the arched ceilings of the library and campus center at the State University of New York at Albany project currently under construction. Edward Durell Stone and Associates is the architectural firm responsible for dormitories, classrooms and service buildings on the 450 acre site on the western edge of the city.

"In our original conception of this project, we were extremely aware of the budgetary considerations," explains Stanley Torkelson, architect and general partner of Edward Durell Stone and Associates, New York. "Naturally, we wanted to achieve noteworthy architectural effects but we had to do this at minimum cost.

"The solution was the erection of columns located at the corners of 20-foot squares. These columns support domes—10, 20 and 30-feet high, depending on the room. On the surface of each dome are implanted lenses of LUCITE which cover fluorescent fixtures."

Torkelson pointed out that the effect of the lights is most dramatic. There is sufficient brightness at eye level, seated or standing, so that supplementary lighting is not required. Further, the lighted domes give the library and campus center a light and airy feeling as if one were in a grove of palm trees.

There are 16 parabolic shaped acrylic lenses in each dome. "Each light slot measures six inches wide and five or six feet long, depending on where it is located on the interior surface of the dome or capital as we call it," Torkelson reports.

"One of the primary advantages of this kind of building system is that we can employ fiberglass forms to shape the cast concrete capitals and columns," Torkelson reports. "We save a substantial sum of money by building the lighting fixtures right into the capitals. While we are doing that, we preshape the ducts through which lighting fixtures service lines will pass. The end result is we have eliminated a considerable amount of otherwise necessary hardware and the labor to install it. For all practical purposes, the lenses of LUCITE are the fixtures themselves."

No special structural supports are necessary to keep the light weight lenses of LUCITE in place. They are held in position in the ceiling by small metal clips.

The idea of using acrylic lenses in slots in the capitals is a combination of the ideas of Torkelson and those of the electrical engineers and consultants on the project, Eitingon and Schlossberg, New York. This electrical engineering firm is a division of

Cosentini Associates, mechanical engineers, New York, responsible for the mechanical engineering on the project.

Herbert Schlossberg cites the permanence of LUCITE as its main attraction.

"In an installation like this, LUCITE offers all the features of glass—plus the fact that it's much tougher." Schlossberg comments. "One aspect of LUCITE, however, that particularly appeals to electrical engineers is that it has superior optical quality. It can be formed into any desired prismatic shape. This is the kind of flexibility that electrical engineers want because it enables them to pick a wide range of lighting effects."

Since each of the four lenses on one side of a column are of a different shape, Sheffield Plastics Company used the design versatility of LUCITE and their own experience and know-how to produce the lenses. They were extruded flat with a prismatic pattern, were then thermoformed to fit the curve of the dome and the ends trimmed to shape.

"One aspect of LUCITE is its light transmission quality. For all practical purposes, it is easily as good as or better than glass. You can't ask for much better than that when you add all the other characteristics of LUCITE, such as its ability to resist discoloration, its anticipated 20-year service life, its lightweight construction which makes it easy to handle and its ease in cleaning—only mild detergents being necessary," Schlossberg concludes.

CREDITS: State University of New York at Albany/Architects: Edward Durell Stone and Associates, 7 East 67th Street, New York 10021/Electrical Engineers & Consultants: Eitingon & Schlossberg, 10 Columbus Circle, New York 10019/Panels fabricated by: Sheffield Plastics Co., Sheffield, Mass./Fixtures fabricated by: Silvray-Litecraft Corporation, 100 Dayton Avenue, Passaic, New Jersey/Fixtures installed by: Mager Electric Company, New York/General Contractor: Basic Construction Company, Newport News, Virginia





Lowenstein's Lowenstein's Department Store has served the residents of Memphis and the surrounding communities for over a century. Now a part of the nationwide City Stores, Inc., a chain with headquarters in New York City, the decision to build a new store on the south edge of Memphis' multi-million dollar civic center area was made three years ago.

The new building is a 25-story high-rise apartment project owned by Sam Dattel, head of Dasco Construction Co. of Memphis, who leases the first five floors to City Stores on a long-term basis. The rest of the building will contain 196 apartments with the top two floors devoted to a dozen penthouses overlooking the mighty Mississippi River.

In determining the lighting specifications, Mr. Stanley Fried, President of Lowenstein's, had a definite preference. Two years ago when Lowenstein's remodeled its East Branch in the Poplar-Plaza Shopping Center, lighting fixtures with KSH acrylic lenses extruded from LUCITE® acrylic plastic

were installed.

"We were so happy and satisfied with the acrylic lighting in our East Branch store that we just couldn't see any other type of lighting for the new store," Fried says.

Mr. Fried's preference was respected, particularly since the choice of acrylic lenses was in complete agreement with the plans of architects Thorn, Howe, Stratton & Strong of Memphis, Tennessee.

The 450 4-by-4 foot fixtures were made by the Light & Power Utilities Corp. (L&P Lighting) in its Olive Branch plant. The lenses were extruded from Du Pont LUCITE by KSH, Incorporated, St. Louis, Mo. The fixtures were installed and fitted with cool white fluorescent lamps by Haines Electric Co. of Memphis.

Joe Key, general superintendent of all Lowenstein's outlets in Memphis, has high praise for the finished job. "We are getting an even diffused lighting with complete glare control. This is accomplished without the lights being offensive to a person's eyes," he says.

Mr. Key describes the KSH lenses as having low brightness,



excellent glare control and sparkling crystal prismatic patterns for maximum efficiency.

"Best of all, I am fond of the minimum maintenance and the ease with which we can work with these fixtures and lenses," Mr. Key says. He reports that the lenses provide simple access into the interior of the fixture and that lamp changing is made easier by the snap-on feature of the lenses.

In discussing the lighting system, Ted R. Salomon, executive vice president of Light & Power Utilities, says, "The prismatic panels in the new Lowenstein's store are a functional design that not only offers strength and excellent lighting but also a sculptured appearance that harmonizes with the colorful interior of the store."

Three distinct prism designs are used to properly control the light, Mr. Salomon points out. These designs are the conical recessed prisms that control lamp images, vertical prisms and horizontal prisms.

"Together these three prism designs provide excellent lamp cut-off or concealment, plus very low brightness at angles

close to the horizontal. Each panel is destaticized for minimum maintenance," Mr. Salomon reports.

"We at Lowenstein's feel that it is poor engineering practice to have large expanses of hazardous deadweight lighting fixtures suspended overhead when modern plastic materials are available which do the job more efficiently and at less cost than glass or other materials," Mr. Key says.

"Each of our merchandising floors has been tastefully decorated. Generally speaking, our department store is much more colorful than you would usually see in a downtown area," Mr. Fried reports. "Our new lighting system featuring L&P fixtures with Du Pont LUCITE has much to do with bringing out these vivid colors."

CREDITS: Lowenstein's Department Store—Memphis, Tenn. of City Stores, Inc., New York City/Architects: Thorn, Howe, Stratton & Strong, Memphis/Fixtures by: Light & Power Utilities Corp., Olive Branch, Miss./Lenses extruded from Du Pont LUCITE® by: KSH, Incorporated, St. Louis, Mo./Fixtures installed by: Haines Electric Company, Memphis/Consulting engineers: Ellers & Reaves, Memphis/General Contractor: Dasco Construction Co., Memphis

MARKED RESEMBLANCE

Seventy-seven hundred cars each hour pass the showroom of Amatucci Chevrolet in Wheaton, Maryland.

Located at the second busiest intersection in the whole state, Mr. Amatucci is deeply concerned about the impression his sign advertising makes on the 93,000 prospective buyers that pass his place of business in a 12-hour period.

The company's sign requirements called for a simple yet sophisticated design. The signs had to be durable but still attractive and pleasing. At all costs, they must not be gaudy. They had to be signs that would inspire confidence and assurance.

The design developed by Art Display Company fulfilled these requirements. The family of signs, main identification and departmental identification as well as entrance and exit signs all shared the same basic design. Although in some the color scheme was reversed, they were all well proportioned, horizontal rectangles with royal blue and white faces made with LUCITE® acrylic plastic. Each sign is supported by a graceful, aluminum semi-arch.

Amatucci's main sign spells in bold, 18-inch high white letters, his name and his product. These sturdy formed letters are fitted through appropriate cuts routed in the 24-inch wide blue, fabricated panels of LUCITE. Six-inch, white, formed letters are mounted on the blue Chevrolet emblem, fabricated from LUCITE, which in turn is mounted on a white acrylic background. Indeed, the color scheme is simple and stunning. The rich true colors are supported 16 feet in the air by a graceful aluminum arch. The double-faced sign's 4-feet 6-inch by 40-foot dimensions command attention from motorists traveling below.

The sign is supported by heavy duty pipe embedded in reinforced concrete. The actual frame of the sign

is fabricated from three-inch by three-inch by one-quarter inch aluminum angles on each side. Cross members intersect at each joint and all joints are welded.

Amatucci's investment in this sign reaps interest every hour of the day, seven days a week. The same high-quality advertising persists at night, lighted by high-output T-12 slimline interior lights, the sign radiates a firm business-like advertisement. At dusk each evening, the lights are turned on automatically and the evening business goes on.

As far as appearance goes, Amatucci owes much to his signs constructed of LUCITE. LUCITE provides a tasteful but striking sign which is always there. At Amatucci's showrooms, the signs and buildings converge into an integrated whole that is by far the outstanding aesthetic unit in the area.

The design of Amatucci's signs has been so successful and so well received that he uses replicas of them in his newspaper advertising. People are coming to know his business through the originality and attractiveness of its signs. And what better method of advertising is there than the establishment of a distinguished symbol in the minds of prospective buyers. A small replica of the signs of LUCITE is used as the dealer's emblem and is placed on cars sold by the firm.

The aesthetic value of the sign has undoubtedly helped business. It has also attracted the attention of such important members of the community as Mrs. Lyndon Johnson's Beautification Council. Amatucci has just been invited to apply for a federal citation for excellence in planning and appearance.

CREDITS: Owner: Mr. Jack Amatucci, Wheaton, Maryland/Sign Manufacturer: Art Display Company, Washington, D.C./Sheet cast from Du Pont LUCITE® by: Cast Optics Corporation, Hackensack, New Jersey



AMATUCCI

CHEVROLET

NEW CAR MODELS



CREDITS: Prince of Peace Lutheran Church, Hot Springs, Arkansas/ Architect: I. Granger McDaniel, Hot Springs/Gen'l. Contractor: Archie Sutton, Inc., Hot Springs/ Skylights: Naturalite, Inc., Garland, Texas/Acrylic sheet cast from LUCITE®; Cast Optics Corporation, Hackensack, New Jersey

Crowning Glory

The Prince of Peace Lutheran Church, Hot Springs, Arkansas, is an edifice designed to convey the strength and spiritual power of the Lutheran Church.

The dominant motif of the building is a curving roof line that has been compared in feeling to Durer's "Praying Hands". The architect, I. Granger McDaniel of Hot Springs, says, "The development of this theme with an 84-foot skylight of LUCITE® acrylic plastic extending the length of the sanctuary enabled us to achieve height and importance on the exterior and an ethereal glow in the interior."

Inside the church, exposed laminated beams reinforce the ascending line and give definition to the volume of the building.

"The variety of architectural styles used by the firm indicates its conviction that the nature and needs of the situation, not the designer's preference, determine the character of each building," McDaniel explains. "This fact is particularly true in church architecture, where the philosophy, theology and liturgy of each denomination requires expression in the structure."

The architect explains that the problem of designing a sanctuary for a mission congregation of only 84 people on a budget of \$60,000 was twofold. The first part of the problem was to capture the strength, spiritual power and liturgy of the Lutheran Church. The second part of the problem was to adhere to the terms of the Mission Board loan which required a seating capacity of 250 in anticipation of growth. "Except for height and light, stringent economy was enforced in all design elements, materials and construction practices," McDaniel reports. The project plans included future development of the site, a

corner lot in a residential area and a future education building.

The daylighting element of the church was planned as an integral part of the design. "The use of another system would have required a completely new approach to the problem," McDaniel states. "This particular unit was selected because of its structural reliability and water-tight integrity."

McDaniel states that his company uses skylights frequently, both because of their practical function in illumination and for dramatic effect.

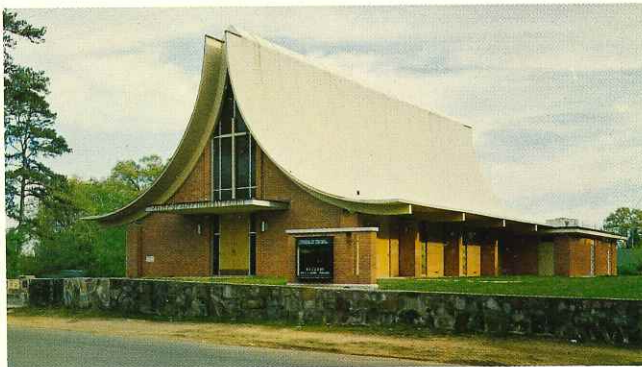
The continuous skylight was made by Naturalite Incorporated of Garland, Texas with acrylic sheet cast from LUCITE by Cast Optics Corporation.

"LUCITE itself is an excellent daylight transmitting medium, with the even diffusing characteristics required for soft dispersed light fill," McDaniel reports. "Its insulating qualities and impact strength also recommend it for this exposed and inaccessible ridge."

Ernest E. H. Nelson, president of the congregation of the Prince of Peace church during its construction worked closely with the architect. He brought the idea of a skylight of LUCITE before the congregation for approval, having been impressed with one he had seen in a church in another state.

Nelson reports that some of the advantages of the skylight are its easy installation, no maintenance, and a lower light bill, but that the main reason it was chosen was for its soft diffused light that is easy on the eyes.

He explains that the skylight of LUCITE was selected rather than any of the other lighting systems considered because it was the system that best solved their lighting problems.





COVER: The cover photograph is a close-up view through the door of the girl on page 2. For details of the door, just read the story.

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